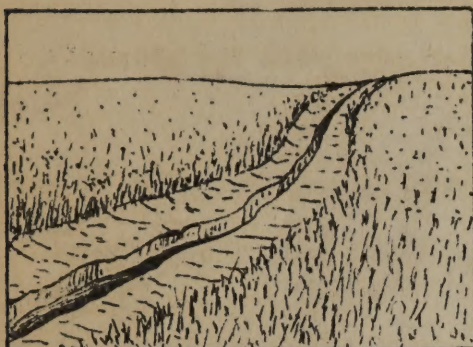


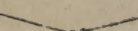
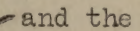
1. 913  
A-3 G-76  
Reserve

Gullies that cannot be crossed increase the time and labor required to produce cultivated crops. Soil washed from gullies onto flatter fields below destroys crops or lowers yields. Establishing grass in these waterways is the cheapest and most practical way to prevent further damage. Waterways constructed on the steeper grades (about 3% or more) cannot be developed too wide.

#### WHAT TO DO ABOUT IT

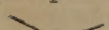


##### Method I

1. If the bottom of the present swale or gully which is to be developed has one of these general shapes  or  and the center ditch (if any) is under 3 feet in depth, SEED SIDES TO REQUIRED WIDTH (preferably when in small grain stubble).

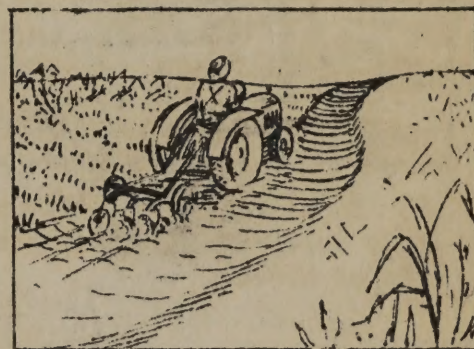
2. When sides are established eliminate ditch (if any) by use of sod and/or sod dams.

##### Method II

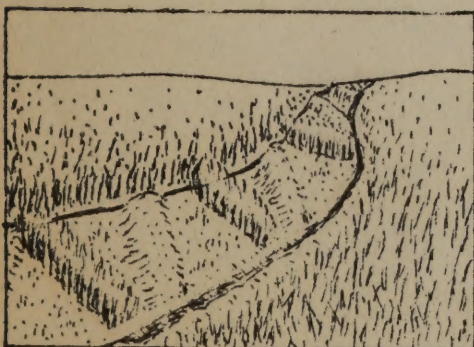
1a. When the bottom of the present ditch is not shaped as in "1" of "Method I" or is over 3 feet in depth - knock down the banks of the gully with blade, plow, disk, or other equipment. Shape the bottom into a broad curve or a flat  curve.

2a. Drive over soil moved into the ditch or otherwise pack it to provide a more desirable seed bed.

3a. It may be advisable in some cases (depending on individual problem) when using this method to provide a dyke or furrow along the sides to keep out runoff water until grass is established. These can be built with blade or plow.



#### FOLLOWING TO BE USED WITH EITHER OF ABOVE METHODS

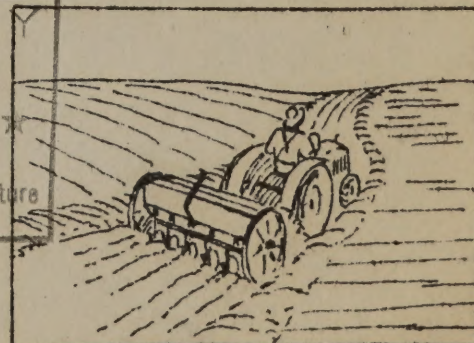


1. Apply well rotted manure to waterway and disk into seedbed. After seeding, apply a mulch of corn cobs, manure or straw,

LIBRARY  
RECEIVED

★ JAN 4 1944 ★

U. S. Department of Agriculture



2. Where possible use "cut out" dykes diagonally across outlet even on shorter waterways.

3. Drill or broadcast 30 lbs. of brome or brome and western wheat (half and half). Seed August 1 to September 25 (fall seeding) or March 15 to April 20 (spring seeding) on a firmly packed seedbed. Use a land roller after seeding.

OVER)



4. Use oats or barley strips across outlet channel approximately 6 inches wide and at intervals of 2 rods or less.
5. If after a waterway is developed, and the channel is not packed, it may be advisable to drill or broadcast oats or a sorghum crop and seed grass the following season. This will allow settlement and provide cover.
6. For fall seedings seed oats or barley 2 pecks per acre with the grass.

#### MANAGEMENT

1. Control weeds by mowing often but not too closely, especially the first year.



2. Raise tillage implements out of the ground when crossing the waterway.
3. Repair at once by sodding any breaks that occur in the grass.
4. Locate roads and stock lanes SOME OTHER PLACE.
5. Harvest the grass for hay or seed.

6. Increase crop yields and reduce the amount of runoff water and silt by contour cultivation, contour strip cropping, terracing, and/or regrassing steeper slopes above.

U. S. DEPARTMENT OF AGRICULTURE  
Extension Service & Soil Conservation Service